

**ELECTRICALLY CONTROLLABLE VARIABLE REFLECTING ELEMENT**

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Abstract of the Disclosure

A reflecting device having electrically controllable variable reflection is provided having a periodic array of liquid crystals disposed in a polymer matrix, the liquid crystal having an index of refraction variable in response to an applied electric field, and means for applying an electric field across the device to provide first and second applied electric field strengths. The index of refraction of the liquid crystal and the index of refraction of the polymer matrix,  $n_p$ , are mismatched at the first and second applied electric field strengths to provide differing peak wavelengths.

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